PART I - ADMINISTRATIVE

Section 1. General administrative information

Title of project

Hood River Fish Habitat Project

BPA project number: 9802100
Contract renewal date (mm/yyyy): 10/1999 ☐ **Multiple actions?**

Business name of agency, institution or organization requesting funding
Confederated Tribes of the Warm Springs Reservation of Oregon

Business acronym (if appropriate) CTWSRO

Proposal contact person or principal investigator:

Name	Michael Lambert
Mailing Address	3430 W 10th
City, ST Zip	The Dalles, OR 97058
Phone	541-296-6866
Fax	541-296-8886
Email address	hoodriverproject@netcnct.net

NPPC Program Measure Number(s) which this project addresses
7.4L.1, 7.4L.2, 7.4N.1, 7.4N.2, 7.6A(all), 7.6B(all), 7.6C.1, 7.6C.2, 7.6C.5, 7.6D, 7.7A.1, 7.8A(all), 7.8D.1, 7.8F.2, 7.8G.1, 7.10A.2, 7.10A.5, 7.10A.7, 7.10K.1

FWS/NMFS Biological Opinion Number(s) which this project addresses

Other planning document references

CRITFC. 1996. WY-KAN-USH-MI WA-KISH-WIT, Cited: Volume II:25-26.

Department of Natural Resources, CTWS, October 1993. Hood River/Pelton Ladder Master Agreement. Cited: entire document.

DOE and BPA. July 1996. Final Environmental Impact Statement (DOE/EIS-0241). Cited: entire document.

ODFW and CTWS. September 1990. Hood River Subbasin Salmon and Steelhead Production Plan.

Hood River Watershed Group and H. Coccoli. In Progress. Hood River watershed assessment and action plan.

NPPC. 1992. NPPC approval letter for the Hood River Master Plan. April 16, 1992.

NPPC. 1994. Columbia River Basin Fish and Wildlife Program. Adopted November 15, 1982. Amended December 14, 1994.

O'Toole, P., and ODFW. 1991a. Hood River Production Master Plan. Cited: entire document.

USDA Forest Service, Mt Hood National Forest. 1996. East Fork Hood River and Middle Fork Hood River Watershed Analysis. Cited: chapters 4 and 5; West Fork Hood River Watershed Analysis. Cited: chapters 6 and 7.

Short description
Implement habitat improvement actions that will support supplementation efforts within the Hood River subbasin as approved by the NPPC and supported by the BPA Environmental Impact Statement (EIS) for the Hood River Production Program (HRPP).

Target species
Spring chinook salmon (Oncorhynchus tshawytscha), summer and winter steelhead (Oncorhynchus mykiss)

Section 2. Sorting and evaluation

Subbasin
Hood

Evaluation Process Sort

CBFWA caucus	Special evaluation process	ISRP project type
Mark one or more caucus	If your project fits either of these processes, mark one or both	Mark one or more categories
☒ Anadromous fish ☐ Resident fish ☐ Wildlife	☒ Multi-year (milestone-based evaluation) ☒ Watershed project evaluation	☐ Watershed councils/model watersheds ☐ Information dissemination ☐ Operation & maintenance ☐ New construction ☐ Research & monitoring ☒ Implementation & management ☐ Wildlife habitat acquisitions

Section 3. Relationships to other Bonneville projects

Umbrella / sub-proposal relationships. List umbrella project first.

Project #	Project title/description
20513	Hood River / Fifteenmile Creek
8902900	Hood River Production Program / Round Butte Hatchery production and Pelton
9500700	Pelton Ladder Hood River Production / PGE O&M
8805303	Hood River Production Program / CTWSRO M&E
8805304	Hood River Production Program / ODFW M&E
9301900	Hood River Production Program - Oak Springs, Powerdale, and Parkdale / O&M

Other dependent or critically-related projects

Project #	Project title/description	Nature of relationship

Section 4. Objectives, tasks and schedules

Past accomplishments

Year	Accomplishment	Met biological objectives?
1996	Completed .5 miles of riparian livestock exclosure fencing on Neal Creek (Kirby property).	Cattle excluded from riparian and allowed to recover.
1996	Completed 75 feet of bioengineered rip rap, which included vegetative plantings, on Neal Creek (Kirby property).	Stabilized stream bank and allowed to recover.
1998	Completed 1.2 miles of riparian livestock exclosure fencing on Neal Creek (Guisto & Meyers property).	Cattle excluded from riparian and allowed to recover.
1998	Completed 75 feet of bioengineered rip rap, which included vegetative plantings, on Neal Creek (Guisto property).	Stabilized stream bank and allowed to recover.
1998	Planted 130 ponderosa pine conifer seedlings on Neal Creek (Kirby property).	89% survival through first summer. When thinning will move seedlings to other fence enclosure locations.
1998	Removed a portion of the Tony Creek	Improved access to three stream

	Dee Mill diversion concrete apron.	miles for spring chinook salmon, winter steelhead, bulltrout, and resident trout.
1998	Completed a preliminary feasibility evaluation for East Fork Irrigation District in developing an NMFS approved diversion and screen or pipe bypass system on Neal Creek.	
1999	Completed 100 feet of bioengineered rip rap, which included vegetative plantings, on Neal Creek (Meyers property) [In progress].	Stabilized stream bank and allowed to recover.
1999	Eliminated the lower Evans Creek irrigation diversion (Higgins pond) by constructing a gravity pressure pipe system [In progress].	Restored two miles of access for winter steelhead, coho salmon, and resident trout habitat.

Objectives and tasks

Obj 1,2,3	Objective	Task a,b,c	Task
1	Restore and recover habitat lost as a consequence of man's activities in the Hood River subbasin (see Hood River / Fifteenmile Creek Umbrella proposal objectives 1-3, strategy g).	a	Describe habitat constraints: review watershed assessments and subbasin plans, existing biological data, land management regulations, and current production and harvest management practices.
		b	Identify habitat improvement projects; describe benefits associated with each projects; and prepare a prioritized list of habitat improvement projects.
		c	Plan and develop habitat improvement projects.
		d	Implement habitat improvement projects.
		e	Monitor and evaluate the physical and biological recovery associated with the habitat improvement projects.
		f	Coordination and administration oversight;

Objective schedules and costs

Obj #	Start date mm/yyyy	End date mm/yyyy	Measureable biological objective(s)	Milestone	FY2000 Cost %
1	10/1999	9/2000	Eliminate direct fish mortality from improperly screened diversions on Neal Creek and the mainstem Hood River.	a) Complete all implemented projects.	100.00%
			Restore 2.5 miles of access for winter steelhead and coho salmon, and 3.5 miles for resident trout on Evans Creek.	b) Monitor and evaluate each project.	
			Increase and improve one mile of naturalized spawning and rearing opportunities for spring chinook salmon, winter steelhead, coho salmon, and resident trout in Rogers Spring.	c) Report success of individual projects based on measurable biological objectives.	
				d) Achieve escapement goals as outlined in the Hood River Basin umbrella proposal objectives 1-3.	
				Total	100.00%

Schedule constraints

No schedule constraints for FY 2000 projects. Milestones listed under the above table (objective schedules and costs) apply to the Hood River Fish Habitat Project and all individual implemented projects.

Completion date
The objective and tasks mentioned above will only require FY 2000 funding. Although, the CTWSRO, as part of the Hood River Production Program, will continue to seek additional funding for habitat opportunities in out years as their identified.

Section 5. Budget

FY99 project budget (BPA obligated): $117,088

FY2000 budget by line item

Item	Note	% of total	FY2000
Personnel	1 month project leader salary	%1	3,124
Fringe benefits	benefits @ 23%	%0	719
Supplies, materials, non-expendable property			0
Operations & maintenance			0
Capital acquisitions or improvements (e.g. land, buildings, major equip.)			0
NEPA costs	Supplement analysis under the Programmatic EIS's	%3	7,500
Construction-related support			0
PIT tags	# of tags:		0
Travel			0
Indirect costs	Indirect @ 41.4%	%0	1,591
Subcontractor	Hood River Soil & Water Conservation District	%8	20,000
Subcontractor	Farmers Irrigation District	%43	100,000
Subcontractor	East Fork Irrigation District	%8	20,000
Subcontractor	Middle Fork Irrigation District	%24	55,000
Subcontractor	Interfluve	%8	20,000
Other			0
TOTAL BPA FY2000 BUDGET REQUEST			$227,934

Cost sharing

Organization	Item or service provided	% total project cost (incl. BPA)	Amount ($)
Hood River Soil & Water Conservation	A Watershed/Habitat Coordinator to oversee all	%0	20,000

District	habitat actions and seek cost share dollars for all habitat projects.		
Middle Fork Irrigation District (MFID)	Pipe 3.25 miles of ditch to eliminate the use of two irrigation water diversions on Evans Creek.	%36	900,000
Farmers Irrigation District (FID)	Engineer, construct, and install a new fish screen facility that meets criteria on the mainstem Hood River.	%39	985,000
East Fork Irrigation District (EFID)	Install an alternative screen and diversion or bypass system on Neal Creek.	%14	350,000
ODFW	Assist in Neal Creek ditch (EFID) and Farmers canal ditch (FID).	%0	1,045
Hood River Watershed Group	Assist in fish salvage and spawning ground surveys (habitat monitoring).	%0	1,400
Hood River Production Program - CTWS M&E contract 8805303	Assist in fish salvage, population estimates, and spawning ground surveys (monitoring activities which coincides with habitat monitoring).	%0	4,750
		Total project cost (including BPA portion)	$2,490,129

Outyear costs

	FY2001	**FY02**	**FY03**	**FY04**
Total budget	$300,000	$300,000	$300,000	$300,000

Section 6. References

Watershed?	**Reference**
☒	CRITFC. 1996. WY-KAN-USH-MI WA-KISH-WIT. The Columbia River Anadromous Fish Restoration Plan of the Nez Perce, Umatilla, Warm Springs, and Yakama Tribes. Portland, Oregon. Cited: volume II, page 25.
☐	CTWS and ODFW, cooperators. January 1998. Annual progress report. Hood River and Pelton Ladder evaluation studies. Annual Progress Report of the CTWS and ODFW (Projects 89-053-03 and 89-053-04) to Bonneville Power Administration, Portland, Oregon.

☐	Department of Natural Resources, Confederated Tribes of the Warm Springs Reservation of Oregon. October 1993. Hood River/Pelton Ladder master agreement. Bonneville Power Administration, Portland, Oregon. Cited: pages 6 and 7.
☐	DOE and BPA (U.S. Department of Energy and BPA). March 1996. Hood River fisheries project. Draft Environmental Impact Statement (DOE/EIS-0241). Bonneville Power Administration, Portland, Oregon. Cited: pages 3-12, 4-18 and 19, 4-24 and 25.
☐	DOE and BPA (U.S. Department of Energy and Bonneville Power Administration). July 1996. Hood River fisheries project. Final Environmental Impact Statement (DOE/EIS-0241). Bonneville Power Administration, Portland, Oregon.
☒	Hood River Watershed Group and H. Coccoli. In Progress. Hood River watershed assessment. Hood River, Oregon.
☒	NonPoint Source Solutions. 1997. Oregon watershed assessment manual. Prepared for the Governors Watershed Enhancement Board. Salem, Oregon.
☐	Northwest Power Planning Council (NPPC). 1992. NPPC approval letter for the Hood River Master Plan to Zane Jackson, Chairman, CTWS. April 16, 1992.
☐	NPPC. 1994. Columbia River Basin Fish and Wildlife Program. Adopted November 15, 1982. Amended December 14, 1994. Northwest Power Planning Council, Portland, OR.
☒	ODFW (Oregon Department of Fish and Wildlife). 1995. Aquatic Inventories Project: Physical Habitat Surveys, Fish Surveys, Hood River subbasin.
☒	ODFW and CTWS. September 1990. Hood River Subbasin Salmon and Steelhead Production Plan. Cited: pages 27-30.
☐	Olsen, E.S., R.A. French, and A.D. Ritchey. 1995. Hood River and pelton ladder evaluation studies. Annual Progress Report of CTWS and ODFW (Projects 88-29, 89-29-01, 89-053-03, 89-053-04, 93-019 to BPA, Portland, Oregon.
☐	O'Toole, P., and Oregon Department of Fish and Wildlife. 1991a. Hood River production master plan. Final report of the CTWS and ODFW (Project 88-053, Contract DE-BI79-89BP00631) to Bonneville Power Administration, Portland, Oregon. Cited: pages 3-5.
☐	Seber, G.A.F. and J.F. Whale. 1970. The removal method for two and three samples. Biometrics: 393-400.
☒	USDA Forest Service, Mt Hood National Forest. 1996. East Fork Hood River and Middle Fork Hood River Watershed Analysis. Mt. Hood-Parkdale, Oregon. Cited: chapters 4 and 5.
☒	USDA Forest Service, Mt Hood National Forest. 1996. West Fork of Hood River Watershed Analysis. Mt. Hood-Parkdale, Oregon. Cited: chapters 6 and 7.
☐	Zippin, C. 1958. The removal method of population estimation. Journal of Wildlife Management 22(1):82-90.

PART II - NARRATIVE

Section 7. Abstract

The Hood River Fish Habitat Project consists of several components: installation of a NMFS approved diversion and screen or bypass system on Neal Creek and a NMFS and USFWS approved fish screen facility on Farmers canal (mainstem Hood River), eliminating direct fish mortality from the improperly screened diversions; construction and installation of an enclosed pressurized irrigation pipe system, eliminating two diversions on Evans Creek and restoring 2.5 miles of winter steelhead and coho salmon habitat, and 3.5 miles of resident trout habitat; removal of a fish passage obstruction on Lake Branch, improving upstream passage for summer steelhead and spring chinook salmon; and completing a spawning channel feasibility evaluation, design, and implementation on Rogers Spring, increasing and improving one mile of naturalized spawning and rearing opportunities for spring chinook salmon, winter steelhead, coho salmon, and resident trout. Irrigation districts have agreed to participate and will except operation and maintenance costs upon completion of the projects. Success of individual projects will be evaluated with the existing CTWS M&E program (project 88-053-03) and reported annually in project reports submitted to BPA (see Hood River / Fifteenmile Creek Umbrella proposal objectives, strategy a). The primary objective of the project is to restore and recover habitat lost as a consequence of man's activities in the Hood River subbasin, working towards achieving HRPP biological objectives (see umbrella). In Section 7 of the 1994 version of the Columbia River Basin Fish and Wildlife Program, the NPPC recommended that implementation of production and habitat actions be fully coordinated (NPPC 1994). An EIS was completed in 1996 for the HRPP. A record of decision was signed supporting the importance and need of habitat improvements (DOE and BPA 1996).

Section 8. Project description

a. Technical and/or scientific background

The HRPP is a fish supplementation project in the lower Columbia Basin funded by BPA and jointly implemented by the CTWS and ODFW. The primary goals of the HRPP are to (1) re-establish naturally sustaining spring chinook salmon using Deschutes stock in the Hood River subbasin, (2) rebuild naturally sustaining runs of summer and winter steelhead in the Hood River, (3) maintain genetic characteristics of the population, and (4) contribute to tribal and non-tribal fisheries, ocean fisheries, and the Northwest Power Planning Council's (NPPC) goal of doubling salmon runs in the Columbia Basin (O'Toole, P. 1991a).

In accepting the Hood River Production Master Plan, the NPPC recommended adopting a three-phased approach which included collecting baseline information, project implementation and facilities construction, and follow-up monitoring and evaluation studies. The NPPC also approved development of a habitat restoration and protection plan for the Hood River (NPPC 1992). Comprehensive collection of data began in the Hood River subbasin in late, 1991, including information on the life history and production of anadromous salmonid stocks and habitat availability and inadequacy (CTWS and ODFW 1997). In 1996, an Environmental Impact Statement was completed for the HRPP cooperatively by BPA, CTWS, and ODFW. A record of decision was completed 10 October, 1996 by Randy Hardy (Administer of BPA); and supports the NPPC goals. The decision was to proceed with Alternative 1, because it best meets the need and purposes stated in the Final EIS and has the best potential for re-establishing or rebuilding and sustaining populations of anadromous salmonids in the Hood River subbasin via a combination of supplementation, habitat improvements, and a monitoring and evaluation program (DOE and BPA 1996).

In Section 7 of the 1994 version of the Columbia River Basin Fish and Wildlife Program, the NPPC recommended that implementation of production and habitat actions be fully coordinated (NPPC 1994). The Tribes, in Volume II of the Spirit of the Salmon Plan, support the NPPC in the need for a combination of supplementation and habitat restoration, "Restoration of the anadromous fish populations in the Hood River subbasin will need to incorporate a combination of improved natural fish production and supplementation with cultured fish. Improved natural production could occur through improvements in the screening of irrigation diversions, habitat restoration and passage restoration (CRITFC 1996)."

It is important to recognize that fish habitat restoration is a key component to achieving the goals of the HRPP and fish recovery. Habitat problems and needs of the Hood River subbasin have been identified and are detailed in numerous reports, management plans, and other documents written by The Tribes, ODFW, Hood River Watershed Group (HRWG), NPPC, BPA, PacifiCorp, USFS, and others in response to identified problems (see references, section g). Implemented habitat improvement projects by CTWS, ODFW, USFS, and other user groups have addressed some of the needs within the Hood River subbasin. One major success in 1996 was the screening of the East Fork Irrigation District's (EFID) diversion. The diversion, which had been unscreened for nearly 25 years, diverts 130 cfs of the East Fork Hood River (including fry, fingerlings, smolts, and adults). Based on fish salvage in the fall of each year by ODFW, CTWS, USFS, and volunteers, it is apparent the new screens will significantly reduce juvenile losses in the East Fork Hood River drainage.

CTWS completed one riparian fencing project on Neal Creek (tributary to the mainstem Hood River) in 1996 as part of the Tribal Early Action Projects funded by BPA. One-half mile of stream was fenced to exclude livestock and 75 feet of bioengineered rip rap rock was placed. This project will enhance water quality, stabilize the streambanks, reduce sediment, and provide additional juvenile fish rearing habitat. Besides fish enhancement,

this project encouraged other landowners to participate in improving fish habitat within the Hood River subbasin (CTWS and ODFW, 1997). In 1998 as part of the Hood River Fish Habitat Project, two adjacent landowners agreed to fence the riparian zone along Neal Creek. See section 4 (past accomplishments) for a more detailed list of habitat projects completed by this project. Additionally, in cooperation with ODFW, National Marine Fisheries Service, U.S. Fish and Wildlife Service, and the Department of Environmental Quality, CTWS has worked with PacifICorp in the relicensing process of Powerdale Dam hydro facility to gain additional water in the mainstem Hood River bypass reach (Rm 1.0-4.0) and replace the inefficient fish screens at Powerdale Dam.

Projects undertaken by the USFS have been designed to mitigate for spawning and rearing habitat degradation in many areas of the drainage. In cooperation with ODFW and CTWS, the USFS between 1988-1993 distributed large woody debris in the upper West Fork and East Fork Hood River, Lake Branch Creek, Clear Branch Creek (above and below Clear Branch Dam), and McGee Creek. The structures created with woody debris have provided fish cover and habitat diversity into the stream. In addition, road closures, removal of culverts and fills, and vegetative replanting have been implemented to lower turbidity levels in the Hood River subbasin. Guidelines for managing riparian buffers along the streams have also gone into affect. The buffer requirements are 300 ft or two perennial tree heights. Having buffer guidelines will further maintain riparian growth, woody debris stream recruitment, shade, and fish cover (ODFW and CTWS 1990).

Other stream habitat projects have been planned by the USFS as part of a Hatfield flood grant. From 1997 until the present, the USFS added additional woody debris in Lake Branch (upstream from raker pit), Clear Branch Creek (between Lawrence Lake Dam and Coe Branch Creek), and in the East Fork Hood River (near Nottingham). In addition, a levee was removed on the East Fork Hood River near Sherwood Campground which now allows the stream to meander more naturally.

Projects implemented by ODFW have been designed to minimize egg-to-smolt mortality rates and to improve passage both upstream and downstream migrant salmonids. In cooperation with private landowners and the irrigation districts, ODFW has attempted to have diversions properly screened and has eliminated a potential barrier to upstream migrant salmonids at “moving” falls located at Rm 3.7 in the West Fork Hood River (funded by BPA).

In coordination with ODFW, Salmon and Trout Enhancement Program (STEP) volunteers have provided assistance in implementing several projects designed to improve spawning and rearing habitat in tributary streams. Rock structures and log deflectors were placed in Neal Creek (tributary to the mainstem Hood River), and Tony and Clear Branch (tributaries to the Middle Fork Hood River) [ODFW and CTWS 1990].

FY 2000 PROJECT BACKGROUND

Although fish habitat restoration projects have been completed within the Hood River subbasin, many opportunities still exist. Aquatic inventory surveys, conducted by ODFW research (Kim Jones) and the USFS, and recent fish passage inventories (screens, diversions, culverts, pumps, and natural barriers) by CTWS, HRWG, ODFW, and Oregon Department of Transportation have identified fish habitat restoration opportunities within the Hood River subbasin. These surveys will be an intricate part of the Hood River Watershed Assessment and Habitat Plan, which clearly defines passage as the greatest habitat limiting factor for fish in the Hood River subbasin (see section d, project history for discussion on the assessment and habitat plan). The background, history, and location of each project are described below:

The East Fork Irrigation District is currently operating an irrigation diversion on Neal Creek, tributary to the mainstem Hood River, with a water right of 40 cfs. The Neal Creek irrigation diversion has been screened since 1960 with a rotary fish screen. However this screen has long been recognized as being inadequate (excessive approach velocities) to protect juveniles from the irrigation ditch. Inaccessibility to the Neal Creek ditch has limited fish salvage operations. Completed salvages by the ODFW and the USFS have found rainbow trout, cutthroat trout, and now listed winter steelhead in the ditch. In FY 1998-99, BPA funded a feasibility study to look at several options. One option would be to replace the existing diversion and screen with one that meets NMFS standards. The last two options are to construct gravity fed pipe lines that utilize existing fish screens and water and would bypass the existing diversion and screen on Neal Creek. All three options have logistical constraints and cost estimates have ranged from $400,000-$2,000,000. When the feasibility study is complete, BPA in FY 99 will fund the engineering design of the preferred alternative and construction will begin in FY 2000 (**see section h, budget for detailed costs**). Given limited fish salvage information, completion of this project will save an estimated 500 juvenile steelhead/rainbow and cutthroat trout annually.

The Middle Fork Irrigation District (MFID) operates three diversions (Evans Creek diversion [Rm 6], Hutson Pond [Rm 4.5], and Higgins Pond [Rm 2.5]) on Evans Creek, tributary to the East Fork Hood River. These eight foot high concrete diversions, with dam boards in place, supply irrigation water to local orchards through a gravity pressure system. Directly upstream of each diversion is a small settling pond used to remove glacial silt (transferred from Middle Fork tributaries) from irrigation water. An Alaska steep pass fish ladder is currently used for upstream adult fish passage on two of the lower Evans Creek diversions, but has proven inadequate. The upper diversion (Rm 6) has no fish passage provided. Furthermore, the diversions are screened using a stationary flat window screen which does not meet NMFS or ODFW standards. Currently, MFID diverts about 30 cfs from Lake Creek, Coe Branch Creek, and Eliot Branch Creek (tributaries to the Middle Fork Hood River) into Glacier ditch, and eventually into upper Evans Creek. Evans Creek is then used to transfer water to the two diversions. The MFID, as part of their long-range operational plan (10-year), has proposed an alternative approach to using the Evans Creek diversions for irrigation water. This approach includes piping the entire Glacier ditch from the Middle Fork tributary diversions East. This

project should allow MFID to take less water from the Middle Fork tributaries because of the elimination of ditch losses and not having to maintain unused overflows off of the pipeline intake structures that are lost out of our system to the East Fork. Taking less water from Middle Fork diversions will directly benefit both listed bulltrout and winter steelhead on the Middle Fork Hood River. In addition, diversion barriers and the transfer of glacial sediment in Evans Creek will be removed. This will provide an additional 2.5 miles of spawning habitat for winter steelhead and coho salmon.

The Farmers Irrigation District (FID) diverts 80 cfs (Farmers Canal) on the mainstem Hood River. The ditch is screened with a rotary drum, and, over the years, has been improved in an attempt to meet fish screen standards. While these efforts have resulted in substantial improvements, the screens still fail to meet approach velocities, seals, and fish bypass standards. Annual fish rescues in Farmers Canal after irrigation system confirmed the need to replace the existing screen. In consultation with CTWS, NMFS, and ODFW, FID is currently designing a NMFS approved fish screen. The project will consist of a horizontal plane wedge-wire screen, which will extend from the entrance canal over the stilling basin. The fish return water will flow to the river from the distal end of the screen facility. A large-diameter pipe, connected to an inlet manifold below the plane of the screen, will convey diverted water to the main reach of Farmers Canal. The screen design and function will meet, and in most cases exceed, NMFS standards and will also meet USFWS bull trout standards. Its important to note: all anadromous and resident fish species in the Hood River subbasin are affected by this inadequately screened diversion and completing this project will go along ways to restore fish runs in the Hood River subbasin.

Rogers Spring is a small tributary on the Middle Fork Hood River where the newly constructed Parkdale Fish Facility draws its water supply and where acclimated spring chinook salmon and winter steelhead will be released beginning in 1999. Because the spring provides a constant flow, there is an opportunity to enhance spawning and rearing habitat between the mouth and the Parkdale barrier for returning hatchery spring chinook salmon and winter steelhead. Physical and elecrofishing surveys have shown limited spawning and rearing habitat available within this 0.65 mile section. The expected return of adult salmonids to the Parkdale Fish Facility will not be utilized for broodstock and most likely will seek areas to spawn in Roger Spring. Because this supplementation project operates within the ODFW Wild Fish Management Policy with control at Powerdale Dam, the actual numbers of returning adults will be manageable. This project proposes to contract an independent hydraulic and habitat specialist to evaluate the feasibility and design of the habitat enhancement project. With a favorable report, the project would be implemented in FY 01.

A habitat coordinator position will be used to implement projects contained in the habitat restoration plan and to provide a network with the Hood River Watershed Council. This position is funded equally by the Hood River Soil and Water Conservation District and CTWS. Without this subcontract a full-time tribal employee would be hired to fill this position at an additional cost (salary, benefits, and indirect) to the habitat project.

b. Rationale and significance to Regional Programs

The project meets all known local, state, federal, and tribal laws. The NPPC under the Columbia River Basin Fish and Wildlife Program has approved many similar projects in the state of Oregon, Washington, and Idaho. Several of these projects have been successfully implemented by BPA, including combinations of supplementation and habitat projects within the Umatilla and Yakama Basins, involving state and tribal projects.

This project is consistent with several areas of the NPPC's Fish and Wildlife Program, Section 7.0. Specifically, it is consistent with sections 7.0A, 7.6, 7.7, 7.8, and 7.10 through a combination of supplementation (HRPP, ongoing projects) and habitat restoration, with goals of increasing natural production and survival significantly; cooperative habitat restoration efforts with private landowners; watershed restoration through activities cooperatively undertaken by federal, state, tribal, and private parties; individual project objectives providing necessary passage and screens and water quality and quantity for anadromous and resident fish (NPPC 1994).

The HRPP, intends to integrate hatchery and natural production and increase stock abundance, productivity, and use of available habitat. However, results will be amplified when coupled with the ongoing and proposed habitat improvement actions in the subbasin. The cumulative effect of the HRPP with habitat improvement projects in the Hood River subbasin will be to increase the chances for recovery of salmonid resources in the subbasin. On a regional basis, successful supplementation and other artificial production projects, together with habitat and passage improvements, will help to achieve the full natural and hatchery production potential of the Hood River subbasin and the Columbia River Basin in general. The cumulative effect will be to amplify the basin-wide shift toward optimum habitat utilization and reduced reliance on traditional hatchery production (DOE and BPA 1996).

All projects have been identified and prioritized using an interdisciplinary team of specialists from the CTWS, ODFW, USFS, and private agency and public representation from the HRWG (resumes, section 9). The focus of this project is to reduce direct fish mortality and increase adult spawning opportunity on tributaries of the Hood River subbasin. On a holistic watershed approach, project efforts rely and build adaptively upon previous and ongoing activities as mentioned earlier (section a).

c. Relationships to other projects

The HRPP is composed of six separate contracts (Project # 9301900, 9500700, 8802900, 8805303, 8805304, and 9802100) designed to increase production of wild summer and winter steelhead and to reintroduce and reestablish spring chinook salmon within the Hood River subbasin. The six contracts, approved by the NPPC and funded by BPA,

primarily provide funding for four broad categories of activities. These include engineering, implementation, habitat, and monitoring and evaluation studies. Funding for the engineering component of the HRPP provides for construction of facilities at Powerdale Dam, Parkdale, and Oak Springs Hatchery that are required to fully implement the HRPP. Funding for implementation provides for broodstock collection, holding and spawning, rearing, and marking and tagging. Funding for the monitoring and evaluation studies provides for the evaluation of the HRPP and any interaction the hatchery program may be having on wild populations of fish. See the Hood River Basin umbrella for additional HRPP information and how each project interacts to meet program objectives.

In Section 7 of the 1994 version of the Columbia River Basin Fish and Wildlife Program, the NPPC reiterated its determination that implementation of production and habitat actions be fully coordinated (NPPC, 1994). In 1996, an Environmental Impact Statement was completed for the HRPP cooperatively by BPA, CTWS, and ODFW. A record of decision was completed 10 October, 1996 by Randy Hardy (Administer of BPA); and supports the NPPC goals. The decision was to proceed with Alternative 1, because it best meets the need and purposes stated in the Final EIS and has the best potential for re-establishing or rebuilding and sustaining populations of anadromous salmonids in the Hood River subbasin via a combination of supplementation, habitat improvements, and a monitoring and evaluation program (DOE and BPA 1996).

The HRPP, if successful, would integrate hatchery and natural production and increase stock abundance, productivity, and use of available habitat. However, results would be amplified when coupled with the ongoing and proposed habitat improvement actions in the subbasin. The cumulative effect of the HRPP with habitat improvement projects in the Hood River subbasin would be to increase the chances for recovery of salmonid resources in the subbasin. On a regional basis, successful supplementation and other artificial production projects, together with habitat and passage improvements, would help to achieve the full natural and hatchery production potential of the Hood River subbasin and the Columbia River Basin in general. The cumulative effect would be to amplify the basin-wide shift toward optimum habitat utilization and reduced reliance on traditional hatchery production (DOE and BPA 1996).

Landowner permission has been granted for all proposal objectives mentioned below. Operation and maintenance costs will be incurred by landowners upon completion of the project. Although, completed habitat projects will continue to be evaluated, and if additional maintenance is necessary, funding would be sought in out-year BPA proposals with no obligation to be funded.

d. Project history (for ongoing projects)

The Hood River Fish Habitat Project began in FY 98 (ctwsmbl1, new proposal) with a budget of $70,000. Following approval by the NPPC, the budget and statement of work was approved by BPA on June 1, 1998. Prior to implementation of the habitat project, a BPA Compliance Checklist and Supplemental Analysis For Watershed Projects Under the

Watershed Management Program EIS needed to be completed. As part of this process, a biological assessment and archeological survey were completed, and consultation with USFWS and NMFS for steelhead and bulltrout listings. Verbal approval from BPA to proceed with the habitat projects was issued on September 17, 1998, after the instream work window (July 15 - August 31) for the Hood River subbasin. CTWS asked BPA for a continuance of the FY 98 budget and statement of work to be combined with the FY 99 contract, and this was granted. Funding for the FY 99 project was $117,088 and the BPA identified project number is 9802100.

The following results are expected from the FY 98 and FY 99 budgets:

Eliminate the lower Evans Creek irrigation diversion (Higgins pond, RM 2.5) by constructing a gravity fed pressure pipe system, restoring two miles of winter steelhead, coho salmon, and resident trout spawning and rearing habitat.

In FY 98, removed a portion of the Tony Creek diversion concrete apron (Rm 1.0), temporarily improving upstream access to three miles of winter steelhead, spring chinook salmon, bulltrout, and resident trout spawning and rearing habitat. CTWS is currently working with the Tony Creek diverion owner Green Hill Lumber Company, who recently purchased the Dee Mill property and attained the water right, on a permanent solution to the diversion passage and screening problem. If the company decides to utilize the water right, design to modify the existing diversion and screen to meet NMFS and USFWS criteria will be completed in FY 99. If the decision is to utilize an alternative water right in the mainstem Hood River by pumping, the diversion on Tony Creek will be removed.

Completed a preliminary feasibility evaluation and engineering design (FY 98 and FY 99) for the East Fork Irrigation District in developing a NMFS approved diversion and screen or pipe bypass on Neal Creek, tributary to the mainstem Hood River. Upon completion in FY 2000, direct fish mortality will be eliminated. Have submitted for construction and installation funding in this FY 2000 document.

In FY 98 & FY 99, excluded livestock on 1.2 miles of Neal Creek (two properties) and 0.5 miles of Lenz Creek (one property) with riparian fencing. Planted 130 ponderosa pine conifer seedlings; with a 89% survival through the first summer. Will allow riparian recovery; resulting in improved water quality. In addition, completed 175 feet of bioengineered rip rap on Neal Creek properties, which included vegetative plantings; will stabilize stream bank and allow to recover.

These habitat project results for FY 98 & FY 99 will also be reported with the Hood River CTWS M&E annual report to BPA.

In conjunction with on the ground habitat projects a Watershed Assessment by the Hood River Watershed Group (HRWG) and a Habitat Protection, Restoration, and Monitoring Plan by the CTWS are being prepared. The Hood River Watershed Assessment follows the Oregon Watershed Assessment Manual developed for the Governors Watershed

Enhancement Board (GWEB) [NonPoint Source Solutions, 1997]. The Oregon assessment procedure uses the geomorphic structure of a stream as the basis for determining habitat potential and evaluation of land use pratices and natural processes. In departure from the GWEB manual, a chapter about wildlife and vegetation in the Hood River subbasin was added with the help of the Forest Service. The completion date of the Watershed Assessment will be January, 1999. At the time of writing this proposal a draft was near completion and was being sent for review by all participants of the HRWG.

Following completion of the Watershed Assessment, a draft copy of the Habitat Protection, Restoration, and Monitoring Plan will be completed by February or March, 1999; and will be finalized following review by co-managers and participants in the HRPP. The Habitat Plan will incorporate components of the watershed assessments, completed by the USFS [USDA Forest Service, Mt Hood National Forest 1996; both the East Fork and Middle Fork Hood River and West Fork Hood River Watershed Analysis] and the Hood River Watershed Group and is essentially a detailed list of fish habitat projects and actions that most directly support the HRPP. This is a working document and will be updated year-to-year as projects are identified and prioritized by a Hood River Subbasin Habitat Work Group consisting of the CTWS, HRWG, ODFW, and the USFS (see section 9, key personnel).

e. Proposal objectives

1) Restore and recover habitat lost as a consequence of man's activities in the Hood River subbasin.

Purpose: This objective is intended to restore / protect anadromous salmonid habitat in the Hood River subbasin. Fish habitat projects listed in methods will be implemented to contribute to the increased natural production of anadromous salmonids in the Hood River subbasin and help the HRPP reach biological objectives (see Hood River Basin umbrella proposal objectives 1-3).

f. Methods

1a) Describe habitat constraints: review watershed assessments and subbasin plans, existing biological data, land management regulations, and current production and harvest management practices.

1b) Identify habitat improvement projects.

1c) Plan and develop habitat improvement projects.

1d) Implement habitat improvement projects:

I. Assist the EFID in installing a NMFS approved diversion and screen or bypass system on Neal Creek to replace the current diversion and screen, eliminating

direct fish mortality to juvenile winter steelhead, coho salmon, and resident trout from the improperly screened diversion.

II. Assist the MFID in installing a gravity fed pipe system for irrigation water; eliminating the use of two diversion barriers on Evans Creek. Upon completion, will restore 2.5 miles of access for winter steelhead and coho salmon, and 3.5 miles for resident trout.

III. Assist FID in engineering, constructing, and installing a NMFS and USFWS approved fish screen facility on the mainstem Hood River (Rm 11.5). This will eliminate direct fish mortality to juvenile summer and winter steelhead; spring chinook, fall chinook, and coho salmon; bulltrout, cutthroat trout, resident rainbow, mountain whitefish, and lamprey from the improperly screened diversion.

IV. Complete a spawning channel feasibility study and design, on Rogers Spring, tributary to the Middle Fork Hood River. This will increase and improve 0.65 miles of naturalized spawning and rearing opportunities for spring chinook salmon, winter steelhead, coho salmon, and resident trout.

1e) Monitor and evaluate the physical and biological recovery associated with the habitat improvement projects: monitoring by BPA projects 8805303 and 8805304 in the Hood River subbasin is ongoing (see Hood River / Fifteenmile Creek Umberella proposal objectives 1-3, strategy a). Purpose of monitoring and evaluation is outlined in the umbrella. The following is more specific monitoring and evaluation measures which will be completed for implemented projects:

I. Upon completion, coordinate with co-managers, NMFS, and EFID to conduct screen or bypass efficiency tests for evaluating impacts on juvenile salmonids; complete fish salvage at the end of the irrigation season to evaluate operation performance, compare to baseline fish salvage data.

II. Winter steelhead and coho salmon spawning ground surveys will be completed annually to assess the upstream passage/spawning benefits.

III. Upon completion, coordinate with co-managers, NMFS and FID to conduct screen efficiency tests for evaluating impacts on juvenile salmonids; complete fish salvage at the end of the irrigation season to help evaluate efficiency, compare to baseline fish salvage data.

IV. Spawning ground surveys will be completed annually to assess the spawning benefits; a two pass or three pass removal method will be used to estimate population numbers and compare to baseline information in the sample reach (Zippin 1958; Seber and Whale 1970).

1f) Coordination and administration oversight:

Activities under this proposal will require close coordination between the ODFW, CTWS, and other project cooperators to ensure the cost effective implementation of all activities designed to achieve biological objective defined in the Hood River Fish Habitat Project.

Provide administration oversight of the BPA project statement of work and budget.

Plan, coordinate, implement, and monitor habitat projects. Complete the BPA Compliance Checklist and Supplemental Analysis For Watershed Projects Under the Watershed Management Program EIS.

Prepare a report summarizing acitivities for FY 2000. Will be reported in addition to the Hood River Production Program M&E tribal project annual report to BPA.

g. Facilities and equipment

The HRPP (CTWS and ODFW) monitoring and evaluation projects have been collecting baseline information on the Hood River subbasin since 1991, and is in the fourth year of implementation and following completion of the EIS. A project office and office equipment and supplies exist for personnel (e.g. office space, computer, desk and supplies, and vehicle). An existing project fisheries biologist will oversee this habitat contract. No additional capital acquisitions or improvements will be billed directly to this project. Most of the implemented habitat projects will be subcontracted to the necessary experts for job completion and will meet state and federal agency standards (Objectives 1-3).

h. Budget

The following itemized budget shows the cost per method in section 8f above:

Method	Supervision & Inspection	Subcontracts	Indirect	Cost share	Total
Method 1a		$2,990		$2,990	$5,980
Method 1b		$3,065		$3,065	$6,130
Method 1c		$3,065		$3,065	$6,130
Method 1d.I		$20,000		$350,000	$370,000
Method 1d.II		$55,000		$900,000	$955,000
Method 1d.III		$100,000		$985,000	$1,085,000
Method 1d.IV		$20,000			$20,000
Method 1e		$3,175		$10,370	$13,545
Method 1f	$3,843	$7,705	$1,591	$7,705	$20,844
NEPA costs					$7,500 .
Column Total	$3,843	$222,500	$1,591	$2,262,195	$2,490,129

Narrative Justification:

The M&E Tribal Project Leader for the HRPP (see key personnel resume, Michael Lambert) will provide administrative oversight, coordination of all project activities, and assist in implementation and monitoring (method 1f). The project cost includes $3,843 ($3,124 salary and $719 benefits) for one months time and $1,591 indirect costs.

A Watershed/Habitat Coordinator (see key personnel resume, Holly Coccoli) will be subcontracted to oversee the habitat work plan and implementation at a cost of $20,000; distributed between methods 1a ($2,990), 1b ($3,065), 1c (3,065), 1e ($3,175), and 1f ($7,705). This is a cost share of 50% with the Hood River Soil and Water Conservation District. Without this subcontract a full-time tribal employee would be hired to fill this position at an additional cost (salary, benefits, and indirect) to the project.

The FID canal fish screen enhancement project (method 1d.III) is estimated to cost $1,085,000; with allowances for general testing, fish mortality studies, advanced engineering, wedge-wire screen material, telemetric supervisory control, data acquisition, and contigencies. The Hood River Fish Habitat Project has budgeted $100,000, which is a 9% cost share.

The MID gravity fed pipe system installation and diversion removal project (method 1d.II) is estimated to cost $1,000,000. The estimate includes purchase of 12,000' of 26" pipe and 5,200' of 18" pipe at $777,000 and installation at $12.50 per foot ($215,000); with the addition of a few pressure reducing stations and miscellaneous costs. The Hood River Fish Habitat Project has budgeted $55,000 for FY 2000 and contributed $45,000 in FY 1999; for a total contribution towards this project of $100,000 (10% cost share).

The EFID construction and installation estimate of an approved diversion and screen or bypass system on Neal Creek (method 1d.I) has not been finalized. In FY 1998, SJO Engineering was contracted for $10,000 (BPA funding) to complete a preliminary feasibility evaluation (completion date December 1998). The purpose was to evaluate three alternatives; two gravity fed bypass piping systems or replacement of the existing screen and diversion. At the time of writing this proposal, the estimate was roughly $400,000 - $2,000,000. In FY 1999, a complete engineering design of the preferred alternative will be completed at a estimated cost of $30,000 (BPA funding). The Hood River Fish Habitat Project has budgeted $20,000 for FY 2000 construction and installation; for a total BPA contribution of $60,000 (3-15% cost share). Not included as a cost share is the potential contribution of Mitchell Act dollars from ODFW.

A spawning channel feasibility evaluation and design on Rogers Spring, tributary to the Middle Fork Hood River, will be subcontracted at an estimated cost of $20,000 (method 1d.IV). The purpose is to increase and 0.65 miles of naturalized spawning and rearing habitat. On Rogers Spring, spring chinook salmon and winter steelhead will be acclimated and volitionally released at the Parkdale Fish Facility (see Hood River / Fifteenmile Creek

Umbrella). Implementation of this project should be completed in FY 2000, as first adult returns will be FY 2001 to Rogers Spring.

Budgeted NEPA costs ($7,500) have been outlined by BPA. BPA will directly use these dollars to complete the Supplemental Analysis Under the Programmatic EIS's. Costs include an archaelogical study, biological assessment, and Section 7 consultation with NMFS and USFWS.

The FY 2000 Hood River Fish Habitat Project is budgeted at $227,934 compared to $117,088 in FY 1999. Although the FY 2000 project would cost $227,934, it is only 9.2% of the total cost of implementing the project ($2,490,629). These projects have been prioritized for completion in FY 2000 based on habitat needs and cost share opportunities.

Section 9. Key personnel

MICK JENNINGS
3430 W 10th Street
The Dalles, OR 97058

EDUCATION

B.S. in Fisheries Science 1965
Dept. of Fisheries and Wildlife
Oregon State University, Corvallis, OR

PROFESSIONAL EXPERIENCE

CONFEDERATED TRIBES OF THE WARM SPRINGS RESERVATION OF OREGON
The Dalles, Oregon. March, 1995 to present. Salaried-40+hrs/week.
Job Title: **Program Coordinator, Hood River Production Program**
Duties: This position oversees the Tribal portion of the Hood River Production Program (HRPP), a Bonneville Power Administration funded program which is to restore anadromous fish runs in Hood River. Duties include oversight of project administration, engineering, construction, monitoring and evaluation of Hood River research, habitat evaluation and fish culture. This position updates Tribal Fish and Wildlife Committee, Tribal Council, Northwest Power Planning Council and others on progress of HRPP. This position budgets and administers a $500,000 monitoring and evaluation contract of Hood River research and supervises a staff of five full-time and three seasonal employees in an office in The Dalles, Oregon.

OREGON DEPARTMENT OF FISH AND WILDLIFE
Portland, Oregon. April, 1990 to February, 1995. Salaried 40+hrs/week.
Job Title: **Steelhead Program Leader**

Duties: This position directs, guides and assists the regions in the Department to implement a Statewide Steelhead Management program. Major duties consist of providing programmatic direction by coordinating the implementation of the policies, objectives and guidelines contained in the Statewide Steelhead Plan; preparing quarterly program progress reports, annual Steelhead Report, and other special reports and news releases; preparing and monitoring biennial budget; directing the research necessary to implement the Steelhead Plan; directing staff involved in collection and analysis of fisheries data; coordination of projects affecting steelhead resources; and providing guidance to Department personnel responsible for implementing the Steelhead Plan on state-of-the-art steelhead management techniques.

OREGON DEPARTMENT OF FISH AND WILDLIFE
Roseburg-Grants Pass, Oregon
Job Title: **District Fish Biologist**, June, 1982 to March, 1990. Salaried-40+hrs/week.
Assistant District Fish Biologist, November, 1966 to May, 1982. 40hrs/week
Duties: Management biologist responsible developing, planning, supervising, analyzing and completing various fish management programs in the district. Approximately 60 percent of activities involved habitat protection and restoration. A considerable amount of the habitat restoration activities involved adult and juvenile fish passage issues. Improvements to artificial fish passage barriers that I assisted in design and personally worked on included Little Butte Dam, Fielder Dam, Waters Creek Dam, Savage Rapids Dam, Kane Creek culvert, and Wimer Dam. I was continually evaluating fish passage at the approximately 100 small dams in the Rogue Basin. Also, a major part of my duties was spent supervising the fish screens program in the upper Rogue where over 150 rotary screens were in operation. Coordinated stream habitat restoration projects with the five USFS ranger districts that I worked with were routinely reviewed and evaluated for fishery resource benefits.

PUBLICATIONS/JOB COMPLETIONS

Steelhead Plan, Oregon Department of Fish and Wildlife, Wade M., et al. 1995. This is a comprehensive plan for production and management of Oregon's anadromous steelhead. I was the primary person responsible for its development and completion, including setting up and overseeing technical and public advisory committees, incorporating comments and developing support of co-managers and the public, and finally adoption by the Fish and Wildlife Commission. This process took about 18 months.

Hooton, B., Jacobs S., Jennings, M., Kostow, K., McPherson, B., Nickelson T., Smith, A., Weeks, H. 1995. Biennial report on the status of wild fish in Oregon. Oregon Department of Fish and Wildlife. Portland, Oregon. 217 p.

Lambert, M. B., Jennings, M., O'Toole, P. 1995. Hood River and Pelton Ladder evaluation studies. Annual Progress Report (Project 89-053-03) of the Confederated Tribes of the Warm Springs Reservation of Oregon. In cooperation with Oregon

Department of Fish and Wildlife. Report B, pages 173-285 to Bonneville Power Administration, Portland. Oregon.

Lambert, M.B., Jennings, M., McCanna J. 1996. Hood River and Pelton Ladder evaluation studies. Annual Progress Report (Project 89-053-03) of the Confederated Tribes of the Warm Springs Reservation of Oregon. In cooperation with Oregon Department of Fish and Wildlife. Report B, pages 163-257 to Bonneville Power Administration, Portland, Oregon.

Lambert, M.B., McCanna J., Jennings, M. In Print. Hood River and Pelton Ladder evaluation studies. Annual Progress Report (Project 89-053-03) of the Confederated Tribes of the Warm Springs Reservation of Oregon. In cooperation with Oregon Department of Fish and Wildlife. Report B to Bonneville Power Administration, Portland, Oregon.

MICHAEL LAMBERT
3430 W 10th Street
The Dalles, OR 97058

EDUCATION:

B.S. in Biology 1992
Western Oregon State College, Monmouth, OR

PROFESSIONAL EXPERIENCE:

THE CONFEDERATED TRIBES OF THE WARM SPRINGS RESERVATION OF OREGON, The Dalles, OR; March 1995 to present. Salaried-40+hrs/week.
Job Title: **Fisheries Project Leader**
Duties: This position reports to the Program Coordinator. This position is responsible for coordinating and implementing field activities for the Hood River Production Program (HRPP) M & E. M & E activities include: determining abundance, distribution, and life history patterns for anadromous and resident fishes; overseeing genetic sampling and developing a comprehensive genetic monitoring and evaluation plan; evaluating ecological interactions of wild/natural fish and hatchery fish; oversee smolt acclimation ponds (setup and operations) and experimental design to determine effectiveness of acclimation of spring chinook salmon and winter and summer steelhead smolts; implement hatchery fish culture monitoring/coordination; and oversee Pelton Ladder (Deschutes River) spring chinook smolt survival studies between the newly modified sections and old established sections of the ladder. I am currently administering a $117,088 habitat budget for the Hood River subbasin; overseeing habitat restoration/protection activities; co-authoring the habitat protection, restoration, and monitoring plan; and coordinating with other agencies and co-manager (ODFW). Compile, summarize, and analyze data collected, and prepare monthly/annual reports for the HRPP.

OREGON DEPARTMENT OF FISH AND WILDLIFE, Various locations.

Job Title: **Experimental Biologist Aide - Fisheries**
Hermiston, OR; November 1994 through February 1995; hourly-40hrs/week.
Tillamook, OR; October 1994 through November 1994; hourly-40hrs/week.
Port Orford, OR; October 1993 through January 1994; hourly-40hrs/week.
LaGrande, OR; June 1993 through September 1993; hourly-40hrs/week.
Hermiston, OR; February 1993 through June 1993; hourly-40hrs/week.
Pendleton, OR; June 1990 through September 1990; hourly-40hrs/week.
Pendleton, OR; June 1989 through September 1989; hourly-40hrs/week.
Duties (relevent): Assisted in preparation and construction of a concrete weir built for improving upstream fish passage. Planned, constructed, and maintained riparian fence enclosures. Enclosures built for maintaining and recovery of riparian vegetation from cattle and sheep grazing. Revegetated degraded riparian zones for quicker recovery. Performed habitat surveys measuring habitat parameters important to desired fish species in proposed habitat project areas. Collected abundance, distribution, and life history patterns for anadromous and resident fishes

PACIFIC STATES MARINE FISHERIES COMMISSION, LaGrande, OR; March 1994 through July 1994; hourly-40hrs/week Job Title: **Biological Assistant - Fisheries**

U.S. FOREST SERVICE - LAMBERT & BEEN, ET AL, Pendleton, OR; May 1992 through December 1992 and May 1991 through February 1992; contracted payment-averaged 46hrs/week.
Job Title: **Private Contractor - Stream Habitat And Fish Surveys**
Duties: Completed over 200 miles of stream habitat and fish surveys documenting: stream channel characteristics and morphology; riparian zone vegetation; fish identification, population, location, barriers, and enhancement opportunities; and wildlife existence. Wrote final reports for each stream surveyed, and within each report documented habitat enhancement and rehabilitation opportunities. Management tasks included overseeing $140,000 budget (between two contracts), negotiating with USFS contracting officers, and training and distributing job duties to staff.

PUBLICATIONS/JOB COMPLETIONS

Completed the FY 1995-1998 HRPP tribal contracts for BPA (project number 89-053-03).

Lambert, M. B., Jennings, M., O'Toole, P. 1995. Hood River and Pelton Ladder evaluation studies. Annual Progress Report (Project 89-053-03) of the Confederated Tribes of the Warm Springs Reservation of Oregon. In cooperation with Oregon Department of Fish and Wildlife. Report B, pages 173-285 to Bonneville Power Administration, Portland. Oregon.

Lambert, M.B., Jennings, M., McCanna J. 1996. Hood River and Pelton Ladder evaluation studies. Annual Progress Report (Project 89-053-03) of the Confederated Tribes of the Warm Springs Reservation of Oregon. In cooperation with Oregon

Department of Fish and Wildlife. Report B, pages 163-257 to Bonneville Power Administration, Portland, Oregon.

Lambert, M.B., McCanna J., Jennings, M. In Print. Hood River and Pelton Ladder evaluation studies. Annual Progress Report (Project 89-053-03) of the Confederated Tribes of the Warm Springs Reservation of Oregon. In cooperation with Oregon Department of Fish and Wildlife. Report B to Bonneville Power Administration, Portland, Oregon.

Completed a Tribal Restoration Plan riparian fencing and rip rap project on Neal Creek, tributary to the Hood River. Project reported in the FY 1996 Annual Report for BPA.

HOLLY COCCOLI
1222 Lincoln Street
Hood River, OR 97031

EDUCATION

M.S. Environmental Engineering and Science 1996
University of Washington, Seattle, WA;
College of Engineering

B.S. in Fisheries Science 1988
University of Washington, Seattle, WA;
College of Ocean and Fishery Science

PROFESSIONAL EXPERIENCE

HOOD RIVER SOIL AND WATER CONSERVATION DISTRICT
Hood River, OR. October 1997 to present. Salaried-40+hrs/week.
Job Title: **Watershed Group Coordinator**
Duties: Produce a watershed assessment and action plan for the Hood River subbasin. Co-author with CTWSRO on the Hood River Fish Habitat Protection, Restoration, and Monitoring Plan. Support and assist member agencies and volunteers with fish habitat restoration and watershed-related projects, including funding applications for projects. Conduct educational activities and monthly meetings.

MUCKLESHOOT INDIAN TRIBE, Auburn, WA.; December 1989 through October 1997. Salaried-40+hrs/week. Job Title: **Water Resources Division Manager**
Duties: Responsible for technical recommendations related to water supply and hydroelectric projects in the Green, Cedar, and White River basins. Analyzed fisheries and environmental impacts of ground and surface water development proposals and water supply plans. Represented tribal fisheries interests in instream flow, fish passage, flood control, reservoir and drought management concerns. Managed projects and consultant contracts for instream flow, fisheries, historical, economic, and hydrogeology research, supervised research biologist and water resource planner. Monitored and responded to

state legislation affecting water resources. Coordinated tribal activities for 1995 settlement with City of Tacoma involving historic damages, instream flow, cultural rights and fisheries enhancement. Developed and negotiated an instream flow agreement for the Green River with the City of Tacoma, and numerous settlements with King County water utilities using groundwater. Participated in state legal proceedings related to groundwater and streamflow resource protection. Represented Tribe in negotiations related to instream flow and anadromous fish mitigation for the City of Seattle Cedar River Watershed Habitat Conservation Plan. Formulated a habitat restoration plan for a 7-mile reach of the White River for a successful grant application funded by US Department of Defense.

POINT NO POINT TREATY COUNCIL, Kingston, WA.; May 1988 to November 1989. Salaried-40hrs/week. Job Title: **Watershed Specialist/Habitat Program Coordinator**

Duties: Responsible for environmental protection activities of the Council (Lower Elwha, Jamestown, and Port Gamble s'Klallam, and Skokomish Tribes) in Kitsap, Clallam, Mason and Jefferson Counties. Supervised Hydropower Specialist and coordinated staff activities in the Timber, Fish and Wildlife program. Managed stream restoration projects, including livestock fencing and large woody debris placement. Represented member Tribes in state and regional nonpoint water pollution activities. Reviewed development impacts on fish, shellfish, and wildlife resources. Conducted water quality monitoring activities. Pursued compliance with environmental laws regarding water quality, hazardous waste, land use, and forest practices. Wrote grant applications addressing water quality, hazardous waste, drinking water and sewer problems.

CITY OF SEATTLE DEPARTMENT OF LIGHTING, Seattle, WA; February 1987 to May 1988. Salaried-40hrs/week. Job Title: **Assistant Environmental Analyst**
Duties: Participated in juvenile and adult fish surveys on the Skagit and Tolt river systems. Produced written meeting summaries for fisheries and instream flow negotiations for the South Fork Tolt River Hydroelectric Project Federal Energy Regulatory Commission settlement agreement. Administered a consultant contract for related Bald Eagle study. Conducted literature search of hydropower impacts on fish resources. Wrote annotated bibliography for Skagit River hydro project for federal licensing documents.

PUBLICATIONS/JOB COMPLETIONS

Effects of Springtime Flow Alteration on Side Channel Habitat in the Green River. MS Thesis, Dept. Of Civil Engineering, University of Washington, 1996. 78 pp.

Agreement Between the Muckleshoot Indian Tribe and the City of Tacoma Regarding the Green/Duwamish River System - August 24, 1995. Fisheries Mitigation Team Coordinator and technical lead for instream flows.

Critical Habitat Issues by Basin for Natural Chinook Stocks in the Coastal and Puget Sound Areas of Washington State. S. Bishop and A. Morgan, eds. Northwest Indian

Fisheries Commission, January 8, 1996. Co-author of Cedar River/Lake Washington section with A. Morgan. p.10-14.

Technical lead for intervention cases, and expert witness in fisheries biology in a major consolidated water rights appeal proceedings for the Green and Cedar Lake Washington watersheds (*Department of Ecology, Muckleshoot Indian Tribe, and Center for Environmental Law and Policy v. Covington Water District*, and numerous other appellants) Washington State Pollution Control Hearings Board (PCHB) Olympia, Wa. 1996.

Muckleshoot Indian Tribe vs. Ecology and Covington Water District Stipulation and Agreed Order of Dismissal (PCHB) signed Feb 19, 1997. Settlement included withdrawal restrictions and provisions for groundwater monitoring related to hydraulic continuity with Soos Creek and the Green River, King County, Washington.

JIM NEWTON
3701 West 13th Street
The Dalles, Oregon 97058

EDUCATION

B.S. in Wildlife Management 1970
Dept. of Fisheries and Wildlife
Oregon State University, Corvallis, OR.

PROFESSIONAL EXPERIENCE

OREGON DEPARTMENT OF FISH AND WILDLIFE
The Dalles, Oregon, May 1981 to present. Salaried monthly - 40+ hours/week.
Job Title: **District Fish Biologist, Mid-Columbia District**.
Duties: This position is responsible for all fishery management activities within the 5,000 square mile Mid-Columbia Fish District. Specific duties include the overseeing of that portion of the Hood River Production Project dealing with the Powerdale Fish Facility operation and maintenance, project coordination with the CTWS and managers of the Round Butte and Oak Springs fish hatcheries. These duties include oversight for the Powerdale Fish Facility operation and maintenance, fish trapping, broodstock collection and transportation, and broodstock spawning. This position budgets and administers a $150,000 operation and maintenance contract for the Powerdale Fish Facility and supervises four full time and three seasonal positions in the Mid-Columbia District Office.

OREGON DEPARTMENT OF FISH AND WILDLIFE
Portland, Oregon. September 1979 to May 1981. Salaried monthly - 40+ hours/week.
Job Title: **Habitat Conservation Division Staff Biologist**.
Duties: This position coordinated the review and comments on State Clearinghouse notices of proposed federally funded projects throughout the state. The review and comments on proposed oil, gas, and geothermal energy exploration projects was also

coordinated with department field biologists. This position worked with Portland and appropriate field staff to review and comment on county land use plans being developed and amended throughout the state to insure that the state's fish and wildlife resources were adequately addressed and protected.

OREGON DEPARTMENT OF FISH AND WILDLIFE
The Dalles, Oregon. September 1971 to September 1979. Salaried monthly - 40+ hours/week. Job Title: **Assistant District Fish Biologist**.
Duties: This position assisted the district fish biologist with all phases of fishery management within the Mid-Columbia Fish District. Specific duties included: working with research personnel conducting fishery research on the lower Deschutes River; stream habitat restoration planning and implementation; environmental investigations (i.e. Corps, DSL, Forest Practices, etc); angler use and harvest sampling programs; fish population inventory; and regular and special report preparation.

PUBLICATIONS/JOB COMPLETIONS

Mid-Columbia Fish District Annual Report - 1996, ODFW (unpublished). This is a concise reporting of all fishery management activities occurring within the Mid-Columbia Fish District during calendar year 1996. I was the person responsible for the preparation and completion of this report and distribution within the ODFW. This is an ongoing process that has been greatly facilitated by the preparation of detailed monthly reports. This report provides a concise summary of much of the district's institutional knowledge. 83 p.

Lower Deschutes River Resident Trout Population Inventory Report, ODFW. Newton, James and Leslie Nelson, 1997. This is a report on annual Deschutes River redband trout population inventory in two representative reaches of the lower Deschutes River. I was the person responsible for the initiation and completion of the field inventory, data analysis, and report preparation and completion. This project was completed in cooperation with the CTWS. 32 p.

Annual Progress Report - Lower Deschutes River, Oregon, Fish Population Studies (federal aide report for Sport Fish Restoration funding). Newton, James and Steven Pribyl, 1996. This is a comprehensive summary of lower Deschutes River anadromous fish studies, including harvest and population and spawner escapement estimates. I am the person responsible for the annual inventory program and completion of annual data analysis and progress report completion. This is an ongoing program that provides important biological data that is used as a valuable tool for fish management strategies. 37 p.

Lower Deschutes River Management Plan and Environmental Impact Statement. BLM, et al. 1993. This is a comprehensive plan for recreational use of the lower 100 miles of the Deschutes River. The plan also contains specific management goals and objectives for natural resource management. I was one of the people comprising the technical team that

drafted much of the plan dealing with natural resource management within the river corridor. I provided much of the technical support for the fish and wildlife resources covered by this plan. Development of the plan included considerable coordination with other state, federal, and local government agencies, as well as the CTWS, and various river user groups. This plan took more than four years to complete. 160 p.

GARY ASBRIDGE

EDUCATION

M.S. in Fishery Resources 1988
University of Idaho

B.S. in Biology 1984
Montana State University

PROFESSIONAL EXPERIENCE

USDA FOREST SERVICE, MT. HOOD NATIONAL FOREST
Hood River Ranger District, Mt. Hood-Parkdale, Oregon, March 1994 to present.
Salaried monthly - 40+ hours/week.
Job Title: **Zone Fisheries Biologist, Hood Ranger and Barlow Ranger Districts**.
Duties:

- Fisheries Program Manager, Hood River and Barlow Ranger Districts.
- Member of Hood River Ranger District leadership team representing fisheries, hydrology, soils, GIS, and computer services.
- Prepare and track fisheries and watershed budgets.
- Interdisciplinary team member for project planning including timber sales, flood restoration, and ski area development.
- Write Biological Assessments and Evaluations to describe project effects on proposed, threatened, and sensitive aquatic species.
- Design, implement and monitor watershed restoration projects, both riparian and in-stream.
- Supervise five permanent employees.

USDA FOREST SERVICE, MT. HOOD NATIONAL FOREST
Barlow Ranger District, Dufer, Oregon, February 1990 to March 1994. Salaried monthly 40+ hours/week. Job Title: **District Fisheries Biologist**.
Duties:

- Interdisciplinary team member for project planning including timber sales, reacreation projects, and watershed restoration.
- Planned, implemented and monitored stream and riparian habitat restoration projects.
- Prepared and tracked district fisheries budget.
- Supervised two fisheries technicians.
- Wrote yearly accomplishment reports for Bonneville Power Administration funded

projects.
- Coordinated baseline and project monitoring program.

PUBLICATIONS/JOB COMPLETIONS

Asbridge, G., J. Dodd, and S. Harte. 1996 (Draft). Mile Creeks watershed restoration monitoring. Final Report 1995-1996. Mt. Hood National Forest, Barlow Ranger District. (This report summarizes an extensive effectiveness monitoring program for a wide range of watershed restoration projects. I was responsible for setting up the monitoring protocol, conducting or overseeing field work, and writing the annual and final report.)

Asbridge, G. and C. Brun. 1992. Fifteenmile basin habitat improvement project, 1992 annual report. Project number 84-11. Bonneville Power Administration, Portland, OR.

Asbridge, G. and T.C. Bjornn. 1988. Survey of potential and available salmonid habitat in the Boise River, Idaho Department of Fish and Game, Job Completion Report, Project F-71-R-10, Subproject III, Job No. 3, Boise, Idaho.

Section 10. Information/technology transfer

Project planning, implementation, and continued monitoring of the project will be summarized within the HRPP CTWS Annual Report for BPA with Project 89-053-03. Project information will be presented to the public and outside agency staff through oral presentations and local newspaper reports.

Congratulations!